

LISTING OF THE CLAIMS

1. (currently amended) A device for fashioning a closure of a puncture site in an issue comprising:

a cannula member having proximal and distal ends and a lumen;

a connecting rod disposed axially within said cannula, said connecting rod having a proximal end oriented towards said proximal end of said cannula and a distal end oriented toward said distal end of said cannula, said connecting rod having an actuating mechanism operative to selectively cause said connecting rod to advance distally or retract proximally within said cannula;

a needle/suture complex mounted upon said distal end of said connecting rod, said needle/suture complex comprising at least one pair of angled needles each of said angled needles having a needle tip and having a suture extending therebetween, said needle/suture complex further comprising two or more needle holder arms each of said needle holder arms receiving an angled needle, said needle holder arms being angled and connected to the distal end of said connecting rod, said connecting rod operative to pivot the needle holder arms between a first operative configuration wherein said needle holder arms extend in opposed directions from the distal end of said cannula and a second operative configuration wherein said needle holder arms are biased inwardly relative to said first operative configuration;

wherein said angled needles are capable of traversing at least one tissue layer in an orientation that is generally perpendicular to the tissue layer and generally parallel to the cannula; and

a needle trap mechanism disposed within the lumen of said cannula and positioned axially about the connecting rod, operative to lockingly engage the needle tips of said

PATENT APPLICATION

Application No. 10/505,272

Attorney Docket No. 127272.00111

angled needles of said needle/suture complex after said needle holder arms assume the second operative configuration; and wherein said needle trap mechanism is operative to draw said angled needles and said needle tips proximally into the lumen of said cannula causing said angled needles to dislodge from a needle holder arms and advance upwardly through the cannula with suture ends remaining attached thereto such that the device may be withdrawn from the puncture site with the suture extending between the needles, forming a closure of said puncture site.

2. (previously presented) The device of claim 1, wherein said angled needles are further operative to assume one or both of the following additional configurations: a folded configuration wherein said angled needles are operative to extend through the lumen of said cannula; and a retracted configuration wherein said angled needles are biased inwardly toward the lumen of said cannula.
3. (original) The device of claim 2 wherein the distal end of said cannula is positionable through a puncture site in a tissue.
4. (cancelled)
5. (cancelled)
6. (cancelled)
7. (previously presented) The device of claim 1 wherein each respective one of said pair of needle holder arms are biased to extend across said puncture site as said needle holder arms assume said first operative configuration.
8. (original) The device of claim 1 further comprising a handle formed upon said cannula.

PATENT APPLICATION

Application No. 10/505,272

Attorney Docket No. 127272.00111

9. (previously presented) The device of claim 15 wherein said handle and said trigger are positioned relative to one another to enable the handle to be grasped and the trigger to be manipulated by a single hand of a user.
10. (currently amended) The device of claim 2 wherein said needle trap mechanism further comprises a cylindrical sleeve axially mounted about said connecting rod ~~within~~ and said cannula, said needle trap mechanism having a proximal end with a lever formed thereon and a distal end having a needle catch formed therein, said needle catch being operative to lockingly engage with said angled needles of said needle/suture complex after said needle holder arms assume said second operative configuration.
11. (original) The device of claim 10 wherein said lever formed upon said needle trap mechanism is operative to cause said needle trap mechanism to extend distally and retract proximally within the said cannula.
12. (previously presented) The device of claim 11 wherein said needle trap mechanism, when lockingly engaged with said needle tips of said angled needles, disengages said angled needles from said needle holder arms and then captures said angled needles within said cannula when said needle trap mechanism retracts proximally within said cannula.
13. (previously presented) The device of claim 1 further comprising a tapered mount formed at said distal end of said connecting rod wherein said needle/suture complex is positioned upon said tapered mount, said tapered mount having a generally hourglass shape.
14. (original) The device of claim 1 wherein said actuating mechanism is a trigger.
15. (previously presented) The device of claim 8 further comprising a trigger formed upon the proximal end of said connecting rod and operative to selectively cause said connecting rod to advance distally or retract proximally within said cannula.

PATENT APPLICATION

Application No. 10/505,272

Attorney Docket No. 127272.00111

16. (currently amended) A device for fashioning a closure of a puncture site in a tissue comprising:

a cannula member having proximal and distal ends and a lumen;

a connecting rod disposed axially within said cannula, said connecting rod having a proximal end oriented towards said proximal end of said cannula and a distal end oriented toward said distal end of said cannula, said connecting rod having an actuating mechanism operative to selectively cause said connecting rod to advance distally or retract proximally within said cannula;

two or more needle holder arms, said needle holder arms being angled and connected to the distal end of said connecting rod, said connecting rod operative to pivot the needle holder arms between a first operative configuration wherein said needle holder arms extend in opposed directions from the distal end of said cannula and a second operative configuration wherein said needle holder arms are biased inwardly relative to said first operative configuration into the lumen of said cannula;

~~wherein said angled needles are capable of traversing at least one tissue layer in an orientation that is generally perpendicular to the tissue layer and generally parallel to the cannula;~~

at least one pair of angled needles having a suture extending therebetween, each of said angled needles having a needle tip and each of said angled needles mounted upon, respectively, each of said needle holder arms; and

a needle trap mechanism disposed within the lumen of said cannula and operative to lockingly engage said needle tips of said angled needles ~~of said needle/suture complex~~ after said needle holder arms assume the second operative configuration; and wherein said needle trap

PATENT APPLICATION

Application No. 10/505,272

Attorney Docket No. 127272.00111

mechanism is operative to disengage said angled needles from said needle holder arms and to draw said angled needle tips and said angled needles into the lumen of said cannula and causing said angled needles with suture ends remaining attached thereto such that the device may be withdrawn from the puncture site with the suture extending between the angled needles, forming a closure of said puncture site.